OFFSHORE MARINE AQUACULTURE IN THE U.S. EXCLUSIVE ECONOMIC ZONE (EEZ): LEGAL AND REGULATORY CONCERNS

Alison Rieser* and Susan Bunsick**
****University of Maine School of Law, **University of Delaware***

Future development of marine aquaculture in the U.S. Exclusive Economic Zone (EEZ) is constrained by legal and regulatory concerns which need to be addressed in order for the industry to become financially viable and internationally competitive. These concerns relate to property rights for aquaculture operators, conflicts with competing uses of public waters, and regulatory gaps and overlap. Failure to resolve these issues creates uncertainties for the economic viability of offshore aquaculture projects, making it difficult for potential investors to obtain financing. While some states have addressed these concerns for projects within the portion of the EEZ under their jurisdiction (for most states, out to 3 nautical miles), the federal government approach with respect to aquaculture facilities in the federal portion of the EEZ (from the state boundary out to 200 nautical miles offshore) is piecemeal. Most importantly, there is no clear legal basis for granting property rights that are needed to protect the large investments necessary to build and operate offshore aquaculture facilities in the open ocean.

A major study coordinated by the National Research Council's Marine Board concluded there are significant opportunities for future growth of marine aquaculture in the United States.

A major study coordinated by the National Research Council's Marine Board concluded there are significant opportunities for future growth of marine aquaculture in the United States.[1] More recently, the Environmental Defense Fund gave the industry a qualified blessing when it concluded that "aquaculture need not be a polluting industry."[2] However, the industry will continue to face serious obstacles until the legal and regulatory regime is modified to clarify rights and jurisdictions, eliminate overlap, and fill regulatory gaps.

...the industry will continue to face serious obstacles until the legal and regulatory regime is modified to clarify rights and jurisdictions, eliminate overlap, and fill regulatory gaps.

This paper describes the current federal regulatory framework, identifies important elements that need to be included in an improved government framework, reviews the major legal obstacles to offshore aquaculture, and presents an overview of recent U.S. government planning initiatives.[3]

Current Federal Regulatory Framework

Federal authority over offshore marine aquaculture rests primarily with two agencies: the Army Corps of Engineers (Corps) and the Environmental Protection Agency (EPA). Under the Rivers and Harbors Act,[4] as amended by the Outer Continental Shelf Lands Act (OCS),[5] the Corps is responsible for issuing permits for structures located in navigable waters. In its "public interest review"[6] of requests for aquaculture facilities, the Corps considers the benefits and detriments to the public interest, including environmental, economic, aesthetic, navigation, property rights, and international interests. Under the Clean Water Act,[7] EPA asserts regulatory authority over discharges from aquaculture facilities as "concentrated aquatic animal production facilities."[8] Other federal agencies, including NOAA's National Marine Fisheries Service and the Fish and Wildlife Service, have an opportunity to review and comment on any permit proposed for issuance by the Corps or EPA. In addition, NOAA's regional Fisheries Management Councils have authority over the harvesting of species covered by fishery management plans.[9] Federal leasing of portions of the seabed beyond state waters for aquaculture is not presently possible under the Outer Continental Shelf Lands Act.[10]

Elements of An Improved Government Framework for Aquaculture

The Marine Law Institute[11] has developed a set of 10 recommendations to improve the regulatory framework for aquaculture:

1. Marine Zones - The responsible government agency should identify marine zones favorable to sea farming and consistent with desired environmental conditions and potential use conflicts.

2. Common Application Procedure - All state and federal permits and leases should share a common application procedure, siting criteria, and site evaluation and monitoring protocols.

3. Property Interests - Aquaculture leases or licenses should convey an exclusive property interest in the cultured species as well as in the right to harvest it from the leased area, as far as it is consistent with public rights of navigation and fishing. This is necessary to secure the sea farmer's investment against negligence, theft, and vandalism, and to allow for civil causes of action against persons who interfere with or damage aquaculture facilities.

4. Agency Coordination - State and federal agencies should adopt memoranda of understanding on coordinating enforcement, research, and technical assistance.

5. Cooperative Arrangements - Maximum acreage limitations should not apply to contracts, joint ventures, or partnerships between small-scale sea farmers and larger aquaculture companies so that cooperative arrangements can be implemented.

6. Economic Priorities - Government agencies should provide priorities in licensing or leasing to fishermen displaced by conservation restrictions on the capture fisheries as an appropriate non-discriminatory means of promoting local economic benefits from sea farming.

7. Community Relations - Sea farm applicants should be encouraged to enter into private agreements with local fishermen's organizations, cooperatives, or community groups for work in the sea farming operation, to prevent use conflicts and promote local economic benefits and acceptance of sea farms.

8. Public Hearings - Agency public hearing procedures should balance the due process rights of sea farm leaseholders with the public right of participation in decisions affecting public resources. Hearings should be formal enough to exclude interventions not relevant to the licensing decision, but not so formal that small-scale sea farm applicants are faced with prohibitive application costs.

9. Insurance Pool - Public and private efforts should work to create an insurance pool to compensate sea farmers for losses due to product destruction or water impoundment orders to protect public health.

10. Small-Scale and Experimental Farming - State and local licensing authorities should adopt license-by-rule procedures for small-scale and experimental farming, with reduced application requirements and expedited procedures.

Legal Obstacles to Consider in Revising the Regulatory Framework

In 1978, the National Research Council[12] identified the major legal obstacles to development of the aquaculture industry. These concerns remain relevant to current discussions about the federal regulatory framework.

1. Limited availability of property rights or other interests that can secure a producer's investment

2. Poorly defined standards that fail to reduce conflicts among competing users of public resources

3. Poorly defined agency jurisdictions leading to delays in defining applicable standards or regulations

4. Redundant regulations due to overlapping agency responsibilities

5. Inappropriate restrictions designed to protect wild stocks

Any changes in the federal regulatory framework need to keep these obstacles in mind in the development of provisions relating to property rights, conflicts with other users, and regulatory requirements.

Property Rights

The key concern with respect to the legal framework affecting marine aquaculture is: how secure is the interest that the sea farmer receives from the government? For the interest to function as a property interest, it needs to have some or all of the following

attributes: transferability, duration and renewability, and revocability only for failure to perform specified conditions.

In addition, special legal principles designed to protect public uses, known as public trust rights, come into play.[13] These public property interests must be balanced against the sea farmer's needs for a secure interest in the cultured species and for protection against damage from other activities.

Future federal regulatory policy must also consider the legal differences between the lease and license forms of tenure. Leases have certain advantages over licenses in terms of security of tenure. Neither, however, can convey permanent, exclusive control of an area of the ocean because of the public property rights and other principles mentioned above.

Finally, the federal government needs to provide for criminal sanctions and a civil right of action against individuals who violate the sea farmer's rights as lessee of the seabed and water column.

Conflicts Among Competing Users

Even when the sea farmer's lease or license is backed by criminal sanctions against persons damaging or interfering with the farm, peaceful co-existence among all users of the marine environment cannot be ensured. The process for issuing leases or licenses must therefore protect the sea farmer from conflicts with other marine uses. Other public and private uses of the marine environment that are potentially affected by aquaculture activities (navigation, fishing, etc.) need to be identified in the statutory authority for the leasing of public waters or submerged lands, and a mechanism for considering information about other uses needs to be included in the decision process. Failure to consider other uses in the licensing process can result in serious use conflicts, leading to court challenges that interfere with operations and could ultimately produce judicial decisions adversely affecting future sea farming opportunities.

Agency Regulatory Requirements

The issue of fragmentation and overlapping agency mandates has two sides. An apparently redundant regulatory requirement may actually serve a useful purpose. Jurisdictional overlap can improve the security of the interest the sea farmer obtains when it signals that an agency with a different constituency has accepted an aquaculture project both in principle and in reality. The objective should be to provide the sea farmer with the advantages of obtaining the approval of multiple agencies without imposing heavy costs in time and money to obtain them.

The administrative process should include a speedy mechanism for exempting aquaculture from regulations that are designed to conserve wild fish stocks, such as restrictions on harvesting or limited vessel-days at sea . These decisions should not have to be made on a case-by-case basis or require a special waiver or exemption, and conflicts of interest should be avoided. Because fishermen are likely to oppose aquaculture ventures they perceive as producing competition for limited fishing grounds or seafood markets, the federal regional fishery management councils (which include strong fishing industry representation) are not an appropriate authority for EEZ aquaculture decisions.

Current Status of U.S. Government Planning Efforts

The U.S. government has begun to focus on the issue of offshore aquaculture in the Exclusive Economic Zone, although much more remains to be done. The major initiatives come from the interagency Joint Subcommittee on Aquaculture (JSA) and the National Oceanic and Atmospheric Administration (NOAA).

The JSA's draft National Aquaculture Development Plan[14] calls for "an appropriate and harmonized Federal regulatory framework" for aquaculture. The plan highlights "the complex, fragmented, and uncertain regulatory environment" and points out that "as a result, aquatic farmers may either be required to comply with a daunting and expensive array of regulations or, as exemplified by offshore marine aquaculture initiatives, be forced to operate in a highly uncertain regulatory framework" (Section 4.4.8). The plan's list of needed regulatory improvements includes "permits and regulations for commercial aquaculture operations in public waters, including Federal marine waters" (Section 5.8). Although the Plan was revised in 1996, the draft has yet to be formally adopted by the JSA.

Within NOAA, marine aquaculture issues are being addressed in several ways. In February 1998, NOAA adopted an agency-wide aquaculture policy, elements of which have been incorporated in its strategic plan. The agency has also drfated an aquaculture policy for the entire Department of Commerce, which is expected to be adopted in February 1999. In addition, the National Marine Fisheries Service (NMFS) has drafted legislation for aquaculture

leasing in the EEZ. The proposed legislation is undergoing internal review within the Department of Commerce, and its prospects are uncertain at this time.

NOAA's strategic plan[15] includes agency promotion of robust and environmentally sound aquaculture development. The plan recognizes the need for a timely regulatory process, and specifically mentions the need to emphasize "a regulatory framework and permitting process for aquaculture in the EEZ." The plan includes the following performance measures for the next 5 years:

1. Promote the commercial rearing of at least seven new species.

2. Reduce the time and cost of permittingenvironmentally sound aquaculture ventures.

3. Provide financial assistance for environmentally sound aquaculture ventures.

4. Identify areas in coastal waters and the EEZ suitable for environmentally sound aquaculture development.

5. Develop and implement environmentally sound aquaculture technologies and practices.

NOAA's implementation strategy specifically mentions the need to develop a coordinated policy on the use of the EEZ for private aquaculture, to address user conflicts affecting aquaculture development, and to determine requirements for the siting of aquaculture operations in the EEZ.

Conclusion

Progress with respect to federal regulation of offshore marine aquaculture in the U.S. EEZ is slow. The National Marine Fisheries Service (NMFS) funded a regional open ocean aquaculture initiative for New England in Fiscal Year 1998, and regional fishery management councils have begun to incorporate aquaculture provisions in their fishery management plans. However, as noted above, this may not be the most desirable approach to developing a regulatory framework for offshore aquaculture in federal waters.

A window of opportunity for addressing the issues discussed in this paper was missed in the most recent reauthorization of the National Aquaculture Act[16] (June 1998), which made no modifications to the existing federal approach. However, funding for marine aquaculture is included in the Clinton Administration's National Oceans Initiative, announced in June 1998. If enacted, the proposal will provide $ 3 million annually over a 3-year peirod beginning in fiscal year 2000. Adoption of JSA's draft National Aquaculture Development Plan could serve as a vehicle for promoting needed change in the legal and regulatory framework for offshore aquaculture and devising a federal policy for leasing federal waters in the EEZ.

Notes

1. Committee on Assessment of Technology and Opportunities for Marine Aquaculture in the United States, National Research Council (U.S.), *Marine Aquaculture: Opportunities for Growth:* Report of the Committee on Assessment of Technology and Opportunities for Marine Aquaculture in the United States, Marine Board, Commission on Engineering and Technical Systems, National Research Council (Washington: National Academy Press, 1992).

2. Rebecca Goldburg and Tracy Triplett, *Murky Waters: Environmental Effects of Aquaculture in the U.S.* (New York: Environmental Defense Fund, 1997).

3. Portions of this paper are based on earlier work by one of the authors. See Alison Rieser, "Defining the Federal Role in Offshore Aquaculture: Should It Feature Delegation to the States?" in *Ocean and Coastal Law Journal* 2 (1997): 209-234.

4. 33 U.S.C. § 403 (1994).

5. 43 U.S.C. § 1333(e) (1994).

6. 33 C.F.R. § 320.4(a)(1) (1995).

7. 33 U.S.C. §§ 1251-1387 (1994).

8. 40 C.F.R. § 122.24(a) (1995).

9. The Magnuson Fishery Conservation and Management Act, 16 U.S.C. §§ 1801-1882 (1994), amended by Sustainable Fisheries Act, Pub. L. No. 104-297, 110 Stat. 3559 (1996) does not expressly authorize the regional fishery management councils or the National Marine Fisheries Service to license aquaculture projects in the EEZ. See William J. Brennan, "To Be Or Not To Be Involved: Aquaculture Management

Options for the New England Fishery Management Council," 2 Ocean & Coastal L.J. 261 (1997). However, NOAA's Office of General Counsel has concluded that aquaculture constitutes "fishing" under the Magnuson Act because it involves harvesting fish from the EEZ by U.S. vessels. See Memorandum from Jay S. Johnson, NOAA Deputy General Counsel, and Margaret F. Hayes, NOAA Assistant General Counsel for Fisheries, to James W. Brennan, NOAA Acting General Counsel (Feb. 7, 1993) (discussing the applicability of federal laws to aquaculture in the EEZ).

10. 43 U.S.C. §§ 1331-1356 (1994).

11. Marine Law Institute, *Legal Methods for Promoting Local Salmon Farming Operations in Down East Maine,* Report to the National Coastal Resources Research and Development Institute (1992).

12. National Research Council, *Aquaculture in the United States: Constraints and Opportunities* (1978):90.

13. According to the public trust doctrine, the states hold all navigable waters, and the lands under them, in trust for the common use of the public. Phillips Petroleum v. Mississippi, 484 U.S. 469 (1988). Traditionally, courts have protected the public right to fishing and navigation in public trust waters and lands, and have even expanded the scope of the public trust to include other uses such as recreation and ecological preservation.

14. National Science and Technology Council, Joint Subcommittee on Aquaculture. *National Aquaculture Development Plan of 1996* (Draft, 5 March 1996). See http://ag.ansc.purdue.edu/aquanic/publicat/govagen/usda/dnadp.htm

15. See http://www.nmfs.gov/bortniak/straplan/obj-4.html

16. National Aquaculture Act of 1980, as amended. 16 U.S.C. 2801.